

Claims

1. A sole for shoe provided with valves placed at its sides for discharging inner air characterized in that each said valve consists of a through channel (4) formed in the thickness of the sole and not involving the tread of the sole, which channel (4) connects the interior of the shoe to the outside and is closed by a perforated diaphragm or membrane (2) of elastic material provided with a convexity directed to the outside and forming a check valve.

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2. The sole according to claim 1, characterized in that a peripheral channel (21) is provided conveying to one or more valves the air blown during walking by a plurality of protrusion or igloos (15), on which the foot of the walker rests with the interposition of a perforated transpiration sole (16), said igloos (15) being hollow and open to the top (14) to the interior of the shoe.

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3. The sole according to any preceding claim, characterized in that said channels and said membranes are of elastic material and are made in one piece with the sole during the same moulding step.

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4. The sole according to the preceding claim, characterized in that a plurality of microholes is formed in each diaphragm or membrane (2) after the moulding step.

5. The sole according to claim 1, characterized in that there is provided:

- a generally vertical side (10) extending in height from foot bearing ground above the tread (18) and to which the upper of the shoe is partially secured;

10 - a plurality of dome-shaped chambers, igloos, protrusions or the like (15), on which the foot rests with the interposition of a perforated transpiration sole (16), each chamber or igloo being provided with a hollow (19) and at the upper side with a through hole (14) allowing the aeration of the shoe whenever the igloos are pressed during walking;

15 - a small channel (21) which follows the periphery of the area containing the igloos and conveys the air blown from the igloos during walking;

20 - a plurality of check valves embodied in the sole, each of them consisting of a thin membrane (2) which is provided with a microhole (2a) and closes a conduit (4) passing through the side of the sole and connecting the interior of the shoe to the outside through a side opening (3).

25 6. The sole according to claim 5, wherein the protrusions (15) have an elliptical plan.

7. The sole according to claim 5, wherein the protrusions have a plan with different shape and size and are distributed in irregular manner.

8. The sole according to claim 5, characterized in that it is made of elastic material such as rubber or the like.

5 9. The sole according to claim 5, characterized in that the side (10) is made of polyurethane and tread (18), protrusion (15) and side valves are of rubber.

10 10. The sole according to claim 5, wherein a generally horizontal resting surface (17) which can be used to secure the upper is disposed between side (10) and small channel (21).

15 11. The sole according to claim 9, wherein in order to prevent the polyurethane from entering the small channel (21) and the area of the protrusions (15), a vertical small wall (23) following the small channel (21) and having a height equal to the protrusions (15) is provided integral with the tread (18).

20 12. The sole for shoe according to claim 5, wherein the aeration chambers formed by the protrusions or igloos (15) are replaced by a layer (27) of elastic transpiration material with a low specific gravity to reduce the weight of the sole and/or its size.

25 13. The sole for shoe according to claim 12, characterized in that the layer (27) can be provided with a plurality of channels or grooves (28) to help the air circulation.